

Remarks

Claims 18 and 26 have been amended. Claims 20, 21, 28 and 29 have been canceled without prejudice and with the understanding that Applicants may pursue the subject matter encompassed by the canceled claims in a future continuation application. The amendments to independent claims 18 and 26 incorporate the limitations of dependent claims 21 and 29, respectively. No new matter has been introduced by these amendments. After entry of the amendments, claims 18, 19, 22-27 and 30-34 will be pending.

1. Rejections under 35 U.S.C. § 102

A. § 102(b) - Kato

Claims 18-34 have been rejected by the Examiner as being anticipated by JP 09-082360 to Kato ("Kato") as evidenced by the Handbook of Batteries by Linden ("Linden").

Applicants respectfully disagree with the Examiner's assessment of the applicability of Kato to Applicants' claimed invention. As indicated in the "Solution" section of the English-language translation of Kato, the invention as described by Kato is a nonaqueous electrolyte secondary battery in which a lithium composite oxide, acting as a cathode active material (*i.e.*, a "positive electrode active material" as referred to in the Kato translation) is coated with a lithium ion conductive solid electrolyte layer, resulting in a battery with improved high temperature characteristics. Paragraphs [0023] through [0025] of the Kato translation describe the invention as having a lithium conductivity solid electrolyte layer formed in the lithium multiple oxide front face. It is further indicated that an ingredient of this solid electrolyte layer includes high molecular weight compounds such as, for example, polyvinylsulfone. Paragraphs [0076] through [0079] describe a procedure for preparing a lithium ion conductivity solid electrolyte layer consisting of a polyvinyl sulfone. More specifically, this solid electrolyte layer is prepared by dissolving LiClO_4 in a mixed solution of propylene carbonate, diethyl carbonate and sulfolane, followed by the slow addition of vinyl sulfone. $\text{LiNi}_{0.8}\text{Co}_{0.2}\text{O}_2$ was supplied to this solution, resulting ultimately, after one hour of mixing, in a solid electrolyte layer containing polyvinyl sulfone forming on the front face of the $\text{LiNi}_{0.8}\text{Co}_{0.2}\text{O}_2$.

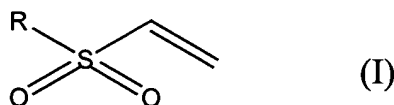
The invention of Kato is very different from Applicants' claimed invention in which the divinyl sulfone is contained in a liquid electrolyte. Because, at the very least, this aspect of Applicants' invention is neither taught nor suggested by Kato, Applicants respectfully request that the Examiner's rejection of the pending claims over Kato be withdrawn.

B. § 102(a) - Hamamoto

Claims 18-34 have been rejected as being anticipated by JP 11-329494 to Hamamoto *et al.* ("Hamamoto").

Applicants have amended independent claims 18 and 26 such that the claimed subject matter is fully supported by the disclosures of JP 11-198351, which is cited as a priority document for the subject application and which has a filing date of July 13, 1999. In particular, claim 1 of JP 11-198351 reads as follows:

1. A non-aqueous electrolyte characterized by comprising a non-aqueous solvent and an electrolyte salt dissolved therein, wherein the electrolyte salt is LiBF₄, said non-aqueous solvent is mainly composed of a cyclic carbonate and a cyclic ester and a optionally linear carbonate and said electrolyte contains a vinyl sulfone derivative having the formula (I):



wherein R indicates a C₁ to C₁₂ alkyl group, C₂ to C₁₂ alkenyl group or C₃ to C₆ cycloalkyl group.

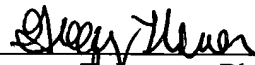
Because the amended claims of the subject application are supported by the disclosures of the priority document, the subject application may rely on the July 13, 1999 filing date of the priority document. This effective filing date is earlier than the November 30, 1999 publication date of the Hamamoto document. As such, Hamamoto cannot be used as § 102(a) prior art against the subject application and Applicants therefore respectfully request that this rejection be withdrawn.

2. Conclusion

Upon consideration of the foregoing, it will be recognized that Applicants have fully and appropriately responded to all of the Examiner's rejections. Accordingly, all claims are believed to be in proper form in all respects and a favorable action on the merits is respectfully requested. Should the Examiner feel that there are any issues outstanding after consideration of this amendment, the Examiner is invited to contact Applicants' undersigned representative to expedite prosecution.

Except for issue fees payable under 37 C.F.R. 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account 50-0310. This paragraph is intended to be a **constructive petition for extension of time** in accordance with 37 C.F.R. 1.136(a)(3).

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